

Appl. No. 10/065,922
Amdt dated February 16, 2004
Reply to Office Action of December 03, 2003

Amendments to the Claims

This listing of claims will replace all prior versions and listing of claims in the application:

Listing of Claims:

1. (currently amended) An integrated circuit comprising:
a substrate;
a feature formed on the substrate;
an insulating layer formed on the feature; and
a radiation protection layer comprising a conductive material covering at least all portions of the feature which are sensitive to radiation, the radiation protection layer is isolated from the feature by the insulating layer, the radiation protection layer ~~is sufficiently thick to~~ reduces radiation damage to the portion of the feature sensitive to radiation.
2. (previously presented) The integrated circuit of claim 1 wherein the feature comprises a ferroelectric capacitor having top and bottom electrodes separated by a ferroelectric layer, the ferroelectric layer being sensitive to radiation.
3. (currently amended) The integrated circuit of claim 2 wherein the radiation protection layer is located on sidewalls of the capacitor to form spacers to reduce radiation damage to the ferroelectric layer as a result of portions of the ferroelectric layer which are unprotected by the top electrode.
4. (original) The integrated circuit of claim 2 further comprises a plurality of features to form a memory array.
5. (currently amended) The integrated circuit of claim 4 wherein the radiation protection layer comprises sidewall spacers located on sidewalls of the capacitor to reduce radiation damage to the ferroelectric layer as a result of portions of the ferroelectric layer which are unprotected by the top electrode.

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6. (cancelled)

7. (cancelled)

8. (cancelled)

9. (cancelled)

10. (cancelled)

11. (currently amended) The integrated circuit of any of claims 1-5 wherein the material of the radiation protection layer absorbs or serves as a barrier to UV radiation.

12. (cancelled)

13. (previously presented) The integrated circuit of claim 11 wherein the insulating layer serves as a barrier to hydrogen.

14. (previously presented) The integrated circuit of claim 11 wherein the material of the radiation protection layer comprises a noble metal, oxides, or compounds thereof.

15. (currently amended) The integrated circuit of claim ~~14~~ 13 wherein the material of the radiation protection layer comprises a noble metal, oxides, or compounds thereof.

16. (cancelled)

17. (cancelled)

18. (cancelled)

19. (cancelled)

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20. (currently amended) A method of fabricating an integrated circuit comprising:
providing a substrate with a feature formed on the substrate;
providing an insulating layer over the feature; and
forming a radiation protection layer comprising a conductive material to cover at least all portions of the feature which are sensitive to radiation, the insulating layer electrically isolating the conductive radiation layer from the feature, the radiation protection layer sufficiently thick to reduce radiation damage to the portion of the feature sensitive to UV radiation.
21. (currently amended) The method of claim 20 wherein the feature comprises a ferroelectric capacitor having a ferroelectric layer between top and bottom electrodes, the radiation protection layer reduces radiation damage to the ferroelectric layer as a result of portions of the ferroelectric layer which are unprotected by the top electrode.
22. (currently amended) The method of claim 20 wherein forming the radiation protection layer comprises forming spacers comprising the conductive material of the radiation protection layer on sidewalls of a ferroelectric capacitor to reduce radiation damage to the ferroelectric layer of the capacitor as a result of portions of the ferroelectric layer which are unprotected by the top electrode.
23. (previously presented) The method of claim 20, 21 or 22 wherein the conductive material of the radiation protection layer comprises a noble metal, oxides, or compounds thereof.